

Richard D Wesel

List of Publications by Year in descending order

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81
papers

1,112
citations

567281

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27
g-index

81
all docs

81
docs citations

81
times ranked

712
citing authors

#	ARTICLE	IF	CITATIONS
1	Protograph-Based Raptor-Like LDPC Codes. IEEE Transactions on Communications, 2015, 63, 1522-1532.	7.8	110
2	LDPC Decoders with Informed Dynamic Scheduling. IEEE Transactions on Communications, 2010, 58, 3470-3479.	7.8	93
3	Enhanced Precision Through Multiple Reads for LDPC Decoding in Flash Memories. IEEE Journal on Selected Areas in Communications, 2014, 32, 880-891.	14.0	89
4	Soft Information for LDPC Decoding in Flash: Mutual-Information Optimized Quantization. , 2011, , .		53
5	Coded Cooperative Data Exchange in Multihop Networks. IEEE Transactions on Information Theory, 2014, 60, 1136-1158.	2.4	53
6	The Cycle Consistency Matrix Approach to Absorbing Sets in Separable Circulant-Based LDPC Codes. IEEE Transactions on Information Theory, 2013, 59, 2293-2314.	2.4	41
7	Optimal Allocation of Redundancy Between Packet-Level Erasure Coding and Physical-Layer Channel Coding in Fading Channels. IEEE Transactions on Communications, 2011, 59, 2101-2109.	7.8	39
8	Multiple-rate low-density parity-check codes with constant blocklength. IEEE Transactions on Communications, 2009, 57, 75-83.	7.8	35
9	Optimal exchange of packets for universal recovery in broadcast networks. , 2010, , .		34
10	Convolutional-Code-Specific CRC Code Design. IEEE Transactions on Communications, 2015, 63, 3459-3470.	7.8	31
11	Multiterminal source coding with an entropy-based distortion measure. , 2011, , .		29
12	Variable-Length Convolutional Coding for Short Blocklengths With Decision Feedback. IEEE Transactions on Communications, 2015, 63, 2389-2403.	7.8	27
13	Improving LDPC Decoders via Informed Dynamic Scheduling. , 2007, , .		24
14	Probabilistically Shaped 4-PAM for Short-Reach IM/DD Links With a Peak Power Constraint. Journal of Lightwave Technology, 2021, 39, 400-405.	4.6	23
15	Protograph-based Raptor-like LDPC codes with low thresholds. , 2012, , .		22
16	Decoding Rate-Compatible 5G-LDPC Codes With Coarse Quantization Using the Information Bottleneck Method. IEEE Open Journal of the Communications Society, 2020, 1, 646-660.	6.9	21
17	Optimizing Transmission Lengths for Limited Feedback With Nonbinary LDPC Examples. IEEE Transactions on Communications, 2016, 64, 2245-2257.	7.8	20
18	Reliability-Output Decoding of Tail-Biting Convolutional Codes. IEEE Transactions on Communications, 2014, 62, 1768-1778.	7.8	16

#	ARTICLE	IF	CITATIONS
19	Quasi-Cyclic Protograph-Based Raptor-Like LDPC Codes for Short Block-Lengths. IEEE Transactions on Information Theory, 2019, 65, 3758-3777.	2.4	16
20	A Study on Universal Codes With Finite Block Lengths. IEEE Transactions on Information Theory, 2007, 53, 3066-3074.	2.4	15
21	Capacities and Optimal Input Distributions for Particle-Intensity Channels. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2020, 6, 220-232.	2.1	14
22	Serial List Viterbi Decoding with CRC: Managing Errors, Erasures, and Complexity. , 2018, , .		13
23	Carrier and Timing Synchronization of BPSK via LDPC Code Feedback. , 2006, , .		12
24	Protograph-Based Raptor-Like LDPC Codes for Rate Compatibility with Short Blocklengths. , 2011, , .		12
25	A rate-compatible sphere-packing analysis of feedback coding with limited retransmissions. , 2012, , .		12
26	On the girth of (3,L) quasi-cyclic LDPC codes based on complete protographs. , 2015, , .		12
27	List-Decoded Tail-Biting Convolutional Codes with Distance-Spectrum Optimal CRCs for 5G. , 2019, , .		11
28	CRC-Aided List Decoding of Convolutional Codes in the Short Blocklength Regime. IEEE Transactions on Information Theory, 2022, 68, 3744-3766.	2.4	11
29	A mutual information invariance approach to symmetry in discrete memoryless channels. , 2008, , .		9
30	Protograph-based q-ary LDPC codes for higher-order modulation. , 2010, , .		9
31	A Tighter Bhattacharyya Bound for Decoding Error Probability. IEEE Communications Letters, 2007, 11, 346-347.	4.1	8
32	Optimal Transmission Strategy and Explicit Capacity Region for Broadcast Z Channels. IEEE Transactions on Information Theory, 2008, 54, 4296-4304.	2.4	8
33	Nonlinear Trellis Codes for Binary-Input Binary-Output Multiple-Access Channels with Single-User Decoding. IEEE Transactions on Communications, 2012, 60, 364-374.	7.8	8
34	Reliability-based error detection for feedback communication with low latency. , 2013, , .		8
35	Short-blocklength non-binary LDPC codes with feedback-dependent incremental transmissions. , 2014, , .		8
36	Reconstruction-Computation-Quantization (RCQ): A Paradigm for Low Bit Width LDPC Decoding. IEEE Transactions on Communications, 2022, 70, 2213-2226.	7.8	8

#	ARTICLE	IF	CITATIONS
37	CTH02-5: Non-linear Turbo Codes for Interleaver-Division Multiple Access on the OR Channel. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	7
38	The Universal Operation of LDPC Codes Over Scalar Fading Channels. IEEE Transactions on Communications, 2007, 55, 122-132.	7.8	7
39	A Sphere-Packing Analysis of Incremental Redundancy with Feedback. , 2011, , .		7
40	Feedback systems using non-binary LDPC codes with a limited number of transmissions. , 2014, , .		7
41	Design of improved quasi-cyclic protograph-based Raptor-like LDPC codes for short block-lengths. , 2017, , .		7
42	Efficient Binomial Channel Capacity Computation with an Application to Molecular Communication. , 2018, , .		7
43	Information Bottleneck Decoding of Rate-Compatible 5G-LDPC Codes. , 2020, , .		7
44	Finite-Support Capacity-Approaching Distributions for AWGN Channels. , 2021, , .		7
45	A Reconstruction-Computation-Quantization (RCQ) Approach to Node Operations in LDPC Decoding. , 2020, , .		7
46	Protograph-based Raptor-like LDPC codes for the binary erasure channel. , 2015, , .		6
47	A Systematic Approach to Incremental Redundancy With Application to Erasure Channels. IEEE Transactions on Communications, 2019, 67, 2620-2631.	7.8	6
48	Low Complexity Algorithms for Transmission of Short Blocks over the BSC with Full Feedback. , 2020, , .		6
49	Incremental redundancy: A comparison of a sphere-packing analysis and convolutional codes. , 2011, , .		5
50	Design of high-rate irregular non-binary LDPC codes using algorithmic stopping-set cancellation. , 2014, , .		5
51	Using Dynamic Allocation of Write Voltage to Extend Flash Memory Lifetime. IEEE Transactions on Communications, 2016, 64, 4474-4486.	7.8	5
52	Decoding Flash Memory with Progressive Reads and Independent vs. Joint Encoding of Bits in a Cell. , 2019, , .		5
53	An Efficient Algorithm for Designing Optimal CRCs for Tail-Biting Convolutional Codes. , 2020, , .		5
54	Optimal Encoding for Discrete Degraded Broadcast Channels. IEEE Transactions on Information Theory, 2013, 59, 1360-1378.	2.4	4

#	ARTICLE	IF	CITATIONS
55	Firing the genie: Two-phase short-blocklength convolutional coding with feedback. , 2013, , .		4
56	RCA analysis of the polar codes and the use of feedback to aid polarization at short blocklengths. , 2015, , .		4
57	A Systematic Approach to Incremental Redundancy over Erasure Channels. , 2018, , .		4
58	Variable-Length Coding With Shared Incremental Redundancy: Design Methods and Examples. IEEE Transactions on Communications, 2019, 67, 5981-5995.	7.8	4
59	Optimal Transmission Strategy and Capacity Region for Broadcast Z Channels. , 2007, , .		3
60	Pilotless carrier phase-synchronization via LDPC code feedback. , 2010, , .		3
61	Chernoff bounds for analysis of rate-compatible sphere-packing with numerous transmissions. , 2012, , .		3
62	Approaching capacity using incremental redundancy without feedback. , 2017, , .		3
63	Finite-Blocklength Performance of Sequential Transmission over BSC with Noiseless Feedback. , 2020, , .		3
64	Sequential Transmission Over Binary Asymmetric Channels With Feedback. IEEE Transactions on Information Theory, 2022, 68, 7023-7042.	2.4	3
65	On the Design of Arbitrarily Low-Rate Turbo-Codes. , 2007, , .		2
66	Optimal natural encoding scheme for discrete multiplicative degraded broadcast channels. , 2009, , .		2
67	Channel Code Analysis and Design Using Multiple Variable-Length Codes in Parallel without Feedback. , 2018, , .		2
68	Linear Rate-Compatible Codes with Degree-1 Extending Variable Nodes Under Iterative Decoding. , 2018, , .		2
69	Demonstration of Uncoordinated Multiple Access in Optical Communications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 3259-3269.	5.4	1
70	A deterministic approach to rate-compatible fountain communication. , 2010, , .		1
71	Minimizing weighted sum finish time for one-to-many file transfer in peer-to-peer networks. , 2011, , .		1
72	Some results on spatially coupled protograph LDPC codes. , 2016, , .		1

#	ARTICLE	IF	CITATIONS
73	FPGA Implementations of Layered MinSum LDPC Decoders Using RCQ Message Passing. , 2021, , .		1
74	Efficient Computation of Viterbi Decoder Reliability With an Application to Variable-Length Coding. IEEE Transactions on Communications, 2022, 70, 5711-5723.	7.8	1
75	WLC21-5: Universal Space-Time Serially Concatenated Trellis Coded Modulations. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	0
76	Optimal independent-encoding schemes for input-symmetric degraded broadcast channels. , 2009, , .		0
77	Superposition coding to support multiple streams, priorities, and channel capacities in the context of GMSK. , 2011, , .		0
78	On q-ary LDPC Code Design for a Low Error Floor. , 2011, , .		0
79	Optimizing pilot length for a Go/No-Go decision in two-state block fading channels with feedback. , 2015, , .		0
80	Universal rate-compatible LDPC code families for any increment ordering. , 2016, , .		0
81	Comparison of Integrated and Independent RF/FSO Transceivers on a Fading Optical Channel. , 2020, , .		0